


 954-657-1018 philip@philpmatusiak.com Home About

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# Philip M. Matusiak

Cyber Intelligence Investigation  
Computer Forensic  
Cloud Developer  
Programmer  
Technical Trainer  
Adjunct Instructor

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## Education

- Concordia, Computer Science
- Ivy Tech College, Industrial Technology
- AIB College of Business, IBM AS/400 Technician Program
- Current Technologies Computer Learning Center, MCSE
- Microsoft, Adobe and Amazon Web Services Vendor Education Centers
- United States Marine Corps Institute

## Professional Experience

- DRM Development Inc., President, Consultant and Developer, 1995 – Present
- Speckin Forensics, Computer Forensics Analyst, 2014 – Present
- ONLC Wilmington DE, Technical Trainer, 2014 – Present
- Ames Computer Learning Center, Owner, 2007 – 2014
- Des Moines Area Community College, Adjunct Instructor, 2002 – 2007
- New Horizon Computer Learning Center Des Moines, IA 1998 – 2002
- United State Marine Corps, Honorable Discharge
- Board Recognized Cyber Intelligence Investigator
- State of Michigan Court Expert Witness Testimony in Digital Forensics

## Certification

- Microsoft Certified Professional (25+ Years)
- CIW Certified Professional, Web and Internet (20+ Years)
- CIW Certified Associate, Web Development (20+ Years)
- CIW Certified Technical Trainer (20+ Years)
- IBM Certified Specialist (20+ Years)
- Compia I-Net+ Security (20+ Years)
- Leviton Fiber Optic and Voice Certified Installer (10+ Years)

## Professional Associations And Memberships

- Association for Computer Machinery
- Association of Talent Development
- The American Society of Digital Forensics and eDiscovery

## Professional Development

\*Not a complete list of professional development

- MI, Cryptocurrency Forensics Investigation, 2022 (ongoing)
- MI, Cyber Intelligence Investigation, 2021
- CaseAware Legal Software Conference, 2014
- Misys HealthCare Software Conference, 2008
- United States Marine Corps, Staff NCO Academy Graduate, Quantico, VA, 1999
- United States Marine Corps, NCO Academy Graduate, Joplin, MO, 1998
- United States Marine Corps, School of Infantry

## Military Development And Honors

- United States Marine Corps, Personal Administration (7104F)

- United States Marine Corps, Military Justice (7105F)
- United States Marine Corps, Drills and Inspections (7108E)
- United States Marine Corps, Tactical Communications (7103)
- United States Marine Corps, History (7109B)
- United States Marine Corps, Military Training (7107C)
- Marine Corps Institute
  - Nuclear Biological and Chemical Warfare Measures
  - Battle Skills Weapons
  - Metallurgy (Metal Working Construction / Engineering)
  - CAD, Computer Aided Design
  - Personal Finance
  - Leadership Fundamentals
  - Supply Management
- United States Army, Achievement in Outstanding Sciences
  - Presented by Lieutenant General Louis C Wagner Jr, Deputy Chief of Staff for Research, Development and Acquisition

## Honors And Awards

\*Not a complete list of honors and awards

- Excellence In Database Administration, 2003
- United States Marine Corps, Selected Marine Corps Reserve Metal, 1999
- United States Marine Corps, Commendation, Operation Rolling Thunder, 1997
- United States Marine Corps, National Defense Metal, Desert Shield, Enduring Freedom, 1993
- National Science Olympiad Guest Contributor, 1992
- United States Marine Corps, Rifle Sharpshooter (5+ Years)
- United States Marine Corps, Pistol Sharpshooter (5+ Years)
- Purdue University North Central, Achievements in the Biological and Life Sciences
- Purdue University North Central, Achievements in Botany
- Indiana House of Representatives Certificate of Appreciation
  - Presented by Ralph D. Ayres, State Representative

## Professional Activities

\*Not a complete list of professional activities.

- Guest Lecture (Accounting), Rutgers University
- Guest Lecture (Accounting), Fayetteville State University
- Guest Presenter / Trainer (Angular IO), Halliburton, Houston, TX
- Chairman, Marine Corps Birthday Ball 2012
- Speaker (IT Security), Midwest E-Business Conference, Ames, IA 2011

## Civil And Criminal Forensics And Investigations

\*Not a complete list of casework., samples of civil and criminal dockets. Redaction of case names when applicable.

- Expert Witness Testimony, State of Michigan v. *Redacted*
  - Public Intoxication, forensics analysis of police dash cam video and testimony as expert witness in Michigan Court of Law
- Network / Email Analysis, International Corporate, US, China and Nigeria
  - Examination and network tracking of compromised emails leading to million-dollar+ fraud of international auto parts organization
- Crime Scene and Video Enhancement, State of Ohio v. *Redacted*
  - Ohio murder trial in which case involved various aspects of crime scene video and height analysis of suspects in area. Casework also involved validation of camera date/time stamps
- Expert Witness Examination, Michigan Family Court Matter
  - Casework involved audio and video examination and data analysis (meta data) of accused individual involving mature videos possibly being displayed to underage children
- Forensics Investigation, Higher Education University, State of Michigan
  - Investigation and analysis of student device and suspected submission of false online examinations
- Expert Witness Examination Police Dash Cam Video, State of Michigan v. *Redacted*
  - Case involved a police chase with fleeing suspect. Analysis of police dash cam video to identify suspect fleeing and suspect height and investigation of engineering specifications of suspected vehicle
- Civil Case, Auto Parts Manufacturer, Broward County, Florida
  - Casework involved web site and public defamation of character, tracking of data sources of information and published time frame of data in cloud.
- United States Bankruptcy Court In Re: *Debtor Redacted*
  - Casework involved data sciences and analysis of 2.3 million+ pages of pdf documents, 1.2 Terabytes+ data, and 100+ provided data analysis groups in Microsoft Excel.

## Forensics And Application Proficiency Levels

\*Not a complete list of forensics and application proficiency levels

- Adobe Photoshop, Illustrator (30+ Years)
- Intuit Quickbooks (Accounting and Product Integration) (30+ Years)
- Microsoft Windows, Server, SQL Server, IIS Server, ASP (30+ Years)
- Microsoft Word, Excel, PowerPoint, Access, Outlook (25+ Year)
- Microsoft Visio, ASP.Net (20+ Years)
- Adobe Dreamweaver, Fireworks, Acrobat (20+ Years)
- Python, Java, Angular, Selenium Testing, Google Analytics (10+ Years)
- SysTools Forensics Toolkits, Metadata Toolkits (10+ Years)
- Amazon AWS Cloud Infrastructure and Security, Microsoft Azure (10+ Years)
- Harris Data (Accounting and Manufacturing) (10+ Years)
- FTK Forensics Toolkit (5+ Years)
- Misys HealthCare (5+ Years)
- Epic HealthCare (Audit Logging) (2+ Years)

## Publications And Media

\*Not a complete list of publications and media

- Professional Development Media Series
  - Administrative Support
  - Anger Management
  - Assertiveness and Self-Confidence
  - Basic Bookkeeping
  - Budgets and Financial Reports
  - Business Ethics
  - Business Writing
  - Digital Citizenship
  - Internet Marketing Fundamentals
  - Negotiation Skills
  - Talent Management
  - Train the Trainer
  - Virtual Team Building and Management
  - Workplace Diversity
  - Workplace Violence

Philip M. Matusiak

Certified Technical Trainer  
Computer Forensics Analyst  
Application Developer

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Phone: 954-657-1018

Email: [philip@philipmatusiak.com](mailto:philip@philipmatusiak.com)

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## **Summary of Expert Philip Matusiak**

### **Expert Summary**

Mr. Matusiak will provide expert testimony regarding the following:

Significance of IP Addresses and how they relate to a physical address.

The history and significance of the IP Address login history generally and as provided by the government.

How IP Addresses are affected during a remote login.

How emails are sent and received by Google.

That email accounts can forward the receipt of future emails to a separate email account.

To his knowledge and experience with Google's document retention policy.

To his knowledge of Google's document retention policy as it relates to deleted emails.

### **Documents Reviewed in Preparation of Testimony**

Mr. Matusiak reviewed the following documents and information when forming his opinions:

- The documents produced by the government via Google subpoena
- The May 3, 2022 emails between Courtney Wells and Chris Mayes
- The ten (10) emails found in the Purple Folder between Andy Elliott and Courtney Wells
- The remote login system for Oklahoma Motorcars and Native Harvest

# Andrew Peters

(405) 261-9517

## Employment

### **ALIAS**

Security Engineer II, 2022  
Digital Forensics, Security & Incident Response

Associate Security Engineer, 2021  
Digital Forensics, Security & Incident Response

## Education

**University of Central Oklahoma**  
Computer Science and Digital Forensics  
2019 – Present

### **Relevant Courses**

Introduction to Forensic Science  
Digital Evidence  
Crime Scene Processing  
Computer Organization and Architecture

**Eastern Oklahoma County Technology Center**  
Computer repair, Networking, Cybersecurity &  
Digital Forensics.  
2017 – 2019

## Talks and Presentations

- Digital Forensics 101 – Rose State College  
– February 2022

## Case Highlights

- State of Oklahoma Vs. Brian McMahon

## Certifications

- Exterro – ACE – AccessData Certified Examiner
- Microsoft – MTA 98-349 – Windows Operating System Fundamentals
- Federal Communications Commission – Technician Class Amateur Radio Operator License

## Experience and Skills

- 5 years' experience in Information Technology
- Digital Forensics Services in over 25 cases
- Performed services in over 5 homicide cases
- Performed services in multiple cellular location data cases
- Over 12 incident response and remediation cases
- Data Recovery
- Imaging and analysis on Windows, Mac and cellular devices.
- Unlocking encrypted devices
- RAM captures and analysis
- Cloud acquisitions
- On site data collection
- Expertise in proper handling and collection of digital evidence



## **Summary of Expert Andrew Peters**

### **Experience**

Mr. Peters has a long history and work experience in information technology, digital forensics, unlocking encrypted devices, and cloud acquisitions. He has training by taken college classes in computer networking, cybersecurity, digital forensics, digital evidence, computer organization and architecture, computer science and digital forensics.

### **Expert Summary**

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*Speckin Forensics, LLC*

2601 COOLIDGE ROAD, SUITE 202  
EAST LANSING, MICHIGAN 48823  
517-349-3528

PLEASE DIRECT CORRESPONDENCE & PAYMENT HERE:  
110 E. BROWARD BOULEVARD, SUITE 1700  
FORT LAUDERDALE, FLORIDA 33301  
954-763-8134

www.4N6.com

LEONARD A. SPECKIN  
RETIRED DOCUMENT ANALYST

MICHAEL J. SINKE  
RETIRED LATENT PRINT SPECIALIST  
RETIRED CRIME SCENE RECONSTRUCTION  
RETIRED FORENSIC DOCUMENT ANALYST

ROBERT D. KULLMAN  
RETIRED FORENSIC DOCUMENT ANALYST

DR. GEORGE F. JACKSON Ph.D.  
TOXICOLOGIST

ERICH J. SPECKIN  
FORENSIC DOCUMENT ANALYST  
INK DATING SPECIALIST

ROGER J. BOLHOUSE MBA  
LABORATORY DIRECTOR  
CRIME SCENE RECONSTRUCTION  
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THOMAS K. HUARD Ph.D.  
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TERRY NADEAU  
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RICHARD L. BRUNELLE  
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DR. LAURENCE R. SIMSON M.D.  
RETIRED FORENSIC PATHOLOGIST

ANTHONY A. MILONE  
COMPUTER & GRAPHICS SPECIALIST

DR. JULIE HOWENSTINE  
SEROLOGIST  
DNA ANALYST & CONSULTANT  
CRIME SCENE RECONSTRUCTION

**ERICH J. SPECKIN**

Forensic Document Analyst  
Ink Dating Specialist

**EXPERIENCE**

- Employed with Speckin Forensic Laboratories – 1993- Present
- President – 1999 – Present

**EDUCATION**

- Purdue University at age 15 to study engineering
- Albion College at age 17 to study biology and pre-medical
- Michigan State University graduated with a degree in Chemistry (1995)

**FORENSIC  
TRAINING**

- Two year residency with Leonard A. Speckin in the examination of questioned Documents (1993-1995)
- One year residency with Brunelle Forensic Laboratories in the identification and dating of inks (1995-1996)

**PUBLICATIONS**

Thirteen scientific papers and publications authored or co-authored including:

- 1) Obverse-Reverse Intersection of Lines, 1993 Midwestern Association of Forensic Scientists and 1996 American Society of Questioned Document Examiners
- 2) Chemical Removal of Magic Marker on Photocopied Documents, 1995 American Society of Questioned Document Examiners
- 3) A Private Examiner's Response to Ink Age Determination, 1996 American Academy of Forensic Sciences

ERICH J SPECKIN

- 4) Interpretation of Data Obtained in Relative Ink Age Determination Testing, 1997 American Academy of Forensic Sciences
- 5) How Do Forensic Chemists Detect 'Record Tampering'?, 1995 Michigan Lawyer's Weekly, 1995 Virginia Lawyer's Weekly
- 6) Technical Report with Case Studies on the Accelerated Aging of Writing Inks, 1998 International Journal of Forensic Document Examination, 1999 Canadian Society of Forensic Science, 1999 GFS Hamburg, Germany
- 7) The Detection of Mastic on Plastic, 1996 Midwestern Association of Forensic Scientists, 1996 Southwestern Association of Forensic Document Examiners
- 8) More Forensic Solutions to Help Attorneys in Litigation, 1995 Michigan Lawyer's Weekly
- 9) Chapter in Encyclopedia of Crime & Punishment, 2001 Textbook
- 10) Ink Dating Examinations, 2000 NADE journal
- 11) Impression by Traced Forgery, 2001 American Society of Questioned Document Examiners (co-author)
- 12) Response to Criticism of Technique Use in Relative Ink Age Determination, 1999 American Academy of Forensic Sciences
- 13) The Dating of Writing Inks through 2-Phenoxyethanol Using Gas Chromatography-Mass Spectrometry: Advantages, Interpretation, and Limitations 2010, AFDE (co-author)

**INVITED**

**SPEAKER**

Invited Speaker on the subject of forensic including the following groups and venues:

- Michigan State University
- American Trial Lawyers Association
- International Association of Questioned Document Examiners
- Medical Legal Consultants
- National Association of Document Examiners
- Canadian Society of Forensic Sciences
- American Academy of Forensic Sciences
- American Society of Questioned Document Examiners
- Midwestern Association of Forensic Scientists
- Southwestern Association of Forensic Document Examiners
- Medical Defense Attorneys Meetings
- Wayne County Nursing Consultants
- Various Insurance and Private Investigators Associations
- Nevada State Bar Association
- Gesellschaft für Forensische Schriftuntersuchung E.V. (GFS) in Hamburg, Germany

ERICH J SPECKIN

**COURT**

**TESTIFIED**

Testified in cases in Federal Court, Circuit Court, District Court, Union Arbitrations, licensing matters, depositions, House of Representatives, and the State Board of Canvassers in Alaska, Arizona, California, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Missouri, Nevada, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Texas, Virginia, Washington D.C., Washington, West Virginia, and Wisconsin. Also in Vancouver, British Columbia Canada; Monterrey, Mexico, London, England; Jamaica; Tokyo, Japan and Hong Kong.

I have been appointed by judges in Michigan, California, Kentucky, Maine, Florida and Australia to perform examinations at the request of the court.

I have also been retained by the Embassy of Uruguay, Florida Department of Law Enforcement, Michigan Attorney Generals Office, Department of Natural Resources, The State Board of Canvassers, Health Care Fraud Division, Federal Defenders Offices, National Labor Relations Board as well as many local, county, state, and federal offices.

Other clients include General Motors, Ford Motor Company, Chrysler, Honda, NationsBank, National Collegiate Athletic Association, National Basketball Association, National Hockey League Players Association, as well as many others.

I have performed examinations in over 2000 cases and presented sworn testimony in 33 states and five other countries on several levels over 200 times in total. I have worked cases from five continents and many countries. (separate list available upon request)

**NATIONAL MEDIA**

**APPEARANCES**

- National Media Appearances including:
- Wall Street Journal (front page)
- America's Most Wanted
- The Learning Channel (Medical Detectives)
- Good Morning America
- Consulting and prop creation for CSI episodes on ink dating
- Forensic Files

**PROFESSIONAL**

**AFFILIATIONS**

- Society of Forensic Ink Analyst (Board of Directors & President) 1998-2008
- Midwestern Association of Forensic Scientists
- American Society of Testing and Materials

ERICH J SPECKIN

*Speckin Forensics, LLC*

120 N. WASHINGTON SQUARE, SUITE 300  
PMB 5068  
LANSING, MICHIGAN 48933  
517-349-3528 • FAX 954-839-8219

PLEASE DIRECT CORRESPONDENCE & PAYMENT HERE:  
110 E. BROWARD BOULEVARD, SUITE 1700  
FORT LAUDERDALE, FLORIDA 33301  
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SEROLOGIST  
DNA ANALYST & CONSULTANT  
CRIME SCENE RECONSTRUCTION

June 17, 2022

Brett Behenna  
Behenna Goerke Krah & Meyer  
210 Park Ave. Suite 3030  
Oklahoma City, OK 73102

Our File Number: 20220113  
Re: US v. Mayes et al.

Dear Mr. Brett Behenna,

I am by training and experience a Forensic Document Analyst. I have been employed by Speckin Forensic Laboratories from 1993 to the present and have been the president of Speckin Forensic Laboratories since 1999. My primary function in my employment is the examination of documents to determine authorship as well as when documents were created and if they have been altered, changed, or added to.

I received my forensic document examination education beginning in 1993 through 1995. I then trained in the chemical analysis of inks to determine the age of documents from 1995 – 1996. I have a degree in Chemistry from Michigan State University.

I am the author or co-author of fourteen scientific papers in the field of forensic analysis and have testified as an expert in the field of Forensic Document Analysis in nearly four hundred matters – both civil and criminal – in over thirty states and eleven countries. A copy of my current Curriculum Vitae is attached as Exhibit 1. A list of cases that I have presented sworn testimony in is attached as Exhibit 2.

I have examined many cases of created documents, composite documents and documents created after the fact. In one very similar case I was able to prove that a series of emails had been fabricated regarding the movie rights to the movie The Last Samurai.

I am being compensated at a rate of \$600 per hour. My compensation in this matter is in no way contingent on the content of my opinion, or on the outcome of this matter.

I received the purported original questioned documents by electronically first, then I received for examination via UPS Next Day Air (1ZR0X2974490161933). I further reviewed documents from the dealership in Oklahoma City onsite. The examination task was to determine if the questioned documents were created on or about their purported dates or were manufactured or created after the fact.

Original Questioned Documents:

- Q-1: E-mail to Courtney Wells, Dated 4/5/2013
- Q-2: E-mail to Andy Elliott, Dated 3/16/2016
- Q-3: E-mail to Courtney Wells, Dated 3/16/2016
- Q-4: E-mail to Courtney Wells, Dated 8/4/2017
- Q-5: E-mail to Andy Elliott, Dated 8/4/2017
- Q-6: E-mail to Andy Elliott, Dated 8/31/2017
- Q-7: E-mail to Courtney Wells, Dated 9/3/2017
- Q-8: E-mail to Andy Elliott, Dated 2/12/2018
- Q-9: E-mail to Courtney Wells, Dated 2/12/2018
- Q-10: E-mail to Andy Elliott, Dated 4/13/2018

Documents from Purple Folder:

- K-1: 1. Deal Recap - Jody Moore 12-07-2017 [Triplicated].pdf
- K-2: 2. Deal Recap - Shane Bailey Sr. - 12-30-2017 [Non-triplicated].pdf
- K-3: 3. Assignment of Membership Interest - Courtney Wells - 03-07-2022.pdf
- K-4: 4. Travis Copley - Invoice - 12-31-2017.pdf
- K-5: 5. Assignment of Membership Interest - C. Wells - 3-7-22.pdf
- K-6: 6. Deal Recap - Gart Fravert 12-31-17 [Triplicated].pdf
- K-7: 7. OK Tax Commission - Mitsubishi 1-5-2018.pdf
- K-8: 8. Copy of Checks payable to Petty Cash - BRSI - 2016.pdf
- K-9: 9. Notes re Browser \_ Destinations.pdf

Documents from Yellow Folder:

- K-10: 1. Account Transactions - Republic Bank \_ Trust - 2017.pdf
- K-11: 2. NPG, LLC - Checks - 2017.pdf
- K-12: 3. Account Transactions - Republic Bank \_ Trust - NPG - 2015.pdf
- K-13: 4. NPG, LLC - Checks - 2016.pdf
- K-14: 5. Check Search by Payee - 10-18-2017.pdf
- K-15: 6. Check Search by Payee - 10-18-2017.pdf
- K-16: 7. NPG, LLC - Checks - 2016.pdf
- K-17: 8. NPG, LLC - Checks - 2017.pdf
- K-18: 9. BRSI - Fees Owed Others - 03-03-2017.pdf
- K-19: 10. Account Transactions - Republic Bank \_ Trust - 2016.pdf
- K-20: 11. NPG, LLC - 2017.pdf
- K-21: 12. Account Transactions - Republic Bank \_ Trust - 2016.pdf

K-22: 13. Account Transactions - Republic Bank \_ Trust - 2016.pdf  
K-23: 14. Account Transactions - Republic Bank \_ Trust - 2016.pdf  
K-24: 15. Account Transactions - Republic Bank \_ Trust - 2016.pdf  
K-25: 16. Account Transactions - Republic Bank \_ Trust - 2016.pdf  
K-26: 17. Account Transactions - Republic Bank \_ Trust - 2016.pdf  
K-27: 18. Account Transactions - Republic Bank \_ Trust - 2016.pdf  
K-28: 19. Account Transactions - Republic Bank \_ Trust - 2016.pdf

Documents in Black Folder:

K-29: Handwritten notes

I further received known handwriting of Courtney Wells for comparison to K-29 to determine if the handwriting on the pages were authored by Courtney Wells or not.

Procedure:

*Visual Document Examination*

A visual examination of the documents was conducted using alternate lighting sources and transmitted light. This included an inspection with the naked eye as well as under magnification using a microscope.

*ESDA*

ESDA (Electro Static Detection Apparatus) impressions are latent impressions that are generally left when information is written on a top page, leaving an impression or impressions on the page or pages underneath. The ESDA is a generally (or universally) accepted tool for forensic analysis of documents, used by police departments and forensic document analysts around the country, as well as by the Federal Bureau of Investigation and other federal agencies. While conducting my ESDA examinations I adhered to the procedures set forth by the manufacturer, the training I have received in the use of this instrument and the American Society for Testing and Materials guide for the examination of indentations (E 2291-03) and further detailed by SWGDOC Standard for Indentation Examination. These procedures are generally accepted as appropriate in the field of forensic document analysis.

ESDA examinations were performed on the front sides of each questioned document (Q-1 through Q-10) and the K-29 group of handwritten pages.

*VSC6000*

The VSC6000, among other things, uses ultraviolet light and infrared analysis techniques to evaluate and compare inks and/or latent chemicals on documents. The VSC6000 is universally accepted tool for forensic analysis of documents, used by police departments and forensic

document analysts around the country, as well as by the Federal Bureau of Investigation and other federal agencies. While conducting the VSC6000 examinations of the questioned document, I adhered to the procedures set forth by the manufacturer and the training I have received in the use of this instrument. These procedures are generally accepted as appropriate in the field of forensic document analysis.

#### *Toner Comparison by Thin-layer Chromatography*

Samples of black toner were taken from each questioned document to compare the toner on each questioned document (Q-1 through Q-10). To sample the toner, a Harris Uni-Core (0.5 mm) tool was used to remove a small portion of the toner line. Four punches from each selected writing were compared by extracting with 6 µL of pyridine for 3 minutes. Then, 4 µL of each extract was spotted on a thin layer chromatography (TLC) plate. The TLC plates were developed in a solvent mixture of ethyl acetate, ethanol, and water (70:35:30). The samples were then compared based on the dye separations, colors, number of bands, and relative intensities.

#### Results:

##### *Visual Document Examination*

After receiving the questioned documents for examination, the paper was examined for a watermark, and no watermark was present. The questioned documents were examined for misalignments and no misalignments were identified. Two questioned documents (Q-1 and Q-7) were printed containing color while the other questioned documents were not printed in color. Q-1 and Q-7 contained the logo for Big Red Sports/Imports printed color.

An alignment grid was used to examine the text within each document and compare the text, the format of the emails, the headers, and the lines near the headers. No misalignments were noted within any of the questioned documents. It would be difficult for a person to cut-and-paste 10 documents together with no observed misalignments.

The questioned documents were examined for photocopy printer damage. Three questioned documents (Q-2, Q-5, and Q-9) were determined to have the same photocopy printer damage. This is evidence that the three questioned documents were photocopied and on the same printer and share a common source. The photocopy printer damage was compared to the submitted documents and the same photocopy printer damage was not identified in any of the submitted documents.

The options and processes for printing an email through Gmail were researched/tested. Based on this testing it was determined that four questioned documents, Q-2, Q-6, Q-8, and Q-10, headers and footers were redacted. When an e-mail through Gmail, there is an option to include or exclude a header and footer. If the end user chooses to exclude the header and footer, both the header and footer will not be printed on the e-mail. If the end user chooses to include the header and footer, the header will contain the printed date, folder the e-mail was in, and the subject of the e-mail in the header, and the footer will contain the URL for the e-mail. On Q-2, Q-6, Q-8, and Q-10, there is a header without the footer and the header is missing the printed date to the



left. This is a likely reason why there is also evidence of a photocopier being used to create the documents as well as printers. All the other questioned documents (Q-1, Q-3, Q-4, Q-5, Q-7, and Q-9) did not have a header and footer.

*ESDA*

There were no significant impressions identified on the questioned documents.

*VSC6000*

The questioned documents were examined and compared to one another with infrared lighting, UV lighting, and under spot fluorescence. There were no differences identified when examined and compared.

*Toner Comparison by Thin-layer Chromatography*

After examining the TLC plate, the results show at least four different toner/paper combinations. The first is Q-3 and Q-4; Q-2 and Q-8; Q-9 and Q-10, and then Q-1, Q-5, Q-6, and Q-7.

*Handwriting examinations*

Based on the formative, spatial, and proportional similarities that exist between the K-29 group of handwritten notes and the known writings of Courtney Wells that were submitted, it is my opinion that the K-29 group of writings were written by Courtney Wells.

*Further examination*

Based on the photocopy damage patterns that were noted above on the three documents, a site visit was made to observe documents that were created in the normal course of the dealership and contained in the personnel files and car sales files spanning from 2013 to 2020.

The damage pattern observed in the three noted questioned documents (Q-2, Q-5, and Q-9) was found in samples from November 2018 and not in other times frames examined.

Conclusion:

My opinion is based on the observations I made during my examinations and my ability to evaluate these observations, based on the training and experience I have in the area of document examination. It is my opinion that it is highly probable that:

1. The questioned documents were not all created at the same time based on the photocopier damage patterns and the variety of toner/paper combinations.
2. The K-29 group of pages was authored by Courtney Wells.
3. The printing alignment of the text within each email shows no evidence of cut-and-paste type creation.

4. The three pages (Q-2, Q-5, and Q-9) with similar photocopy damage patterns correspond to a copied date in or about November 2018 and no other time frames. It is significant to note that these three emails show different toner/paper formulations and were not done on the same machine at the same time.
5. The comparison to other documents made onsite is strong evidence that at least the three noted emails with the observable damage patterns were created/printed in late 2018.

These opinions are drawn to a reasonable degree of scientific certainty and based on recognized scientific principles.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Erich J. Speckin', with a stylized flourish at the end.

Erich J. Speckin  
Forensic Document Analyst